Abstract:

The present invention concern a process for depositing rare earth oxide thin films, especially yttrium, lanthanum and gadolinium oxide thin films by an ALD process, according to which invention the source chemicals are cyclopentadienyl compounds of rare earth metals, especially those of yttrium, lanthanum and gadolinium. Suitable deposition temperatures for yttrium oxide are between 200 and 400 °C a when the deposition pressure is between 1 and 50 mbar. Most suitable deposition temperatures for lanthanum oxide are between 160 and 165 °C when the deposition pressure is between 1 and 50 mbar.